



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

March 16, 2022

Mr. J. Wesley Hawthorne, PE, PG  
President  
Locus Technologies  
299 Fairchild Drive  
Mountain View, CA 94043

Sent Via Email

Re: EPA Comments on RES234/235/236 Building-Specific Evaluation Report **Ex. 6 PP / Ex. 7(C)**  
Court, Sunnyvale, CA), Triple Site Offsite Operable Unit, EPA Site ID CAN000900265.

Dear Mr. Hawthorne:

EPA has reviewed Locus Technologies' subject Building-Specific Evaluation Report (BSER) dated 25 February 2022, prepared on behalf of Philips Semiconductors Inc. (PSI). The BSER was submitted in accordance with the November 9, 2020, Triple Site Offsite Operable Unit Updated Vapor Intrusion Removal Work Plan.

EPA approves the BSER mitigation plan to install an active submembrane depressurization system (SMDS) mitigation at the **Ex. 6 PP / Ex. 7(C)** apartment building. Given the potential for vapor intrusion into the building's living spaces, EPA asks that Philips proceed with installing the SMDS mitigation as soon as possible.

With regard to the BSER, EPA has the following comments, which will also be applicable to all future residential and school BSERs, as applicable. Please submit responses to EPA's comments and a revised BSER within **14 days**.

1. Section 1 Introduction: The BSER introduction needs to provide some context to the Triple Site OOU and why VI is present in the neighborhood. While past BSERs do not need to be revised, include in future BSERs a general overview of the Triple Site OOU with a link to the EPA website. As an example that Philips may choose to revise, EPA provides the example below:

*The RES234/235/236 property at 744 San Jule Court is located within the EPA Triple Site Offsite Operable Unit Superfund Site (<http://epa.gov/superfund/TripleSite>). The Triple Site was established to clean up groundwater contaminated with trichloroethylene (TCE). TCE is used in various industries and products such as a degreaser, and as an ingredient in glues, paint removers, spot removers, and some cleaners. TCE can cause harmful health effects if present at high enough levels.*

*Historically, about 0.5 miles away TCE was used at the former Signetics, AMD Inc., and TRW Microwave sites (collectively referred to as the Triple Site) to fabricate silicon chips. TCE from these three sites was spilled or released to the environment and leaked*

*into groundwater. While the Signetics, AMD Inc., and TRW Microwave operations stopped in the 1960s-1980s, contaminated groundwater below the sites migrated to the San Miguel neighborhood and despite active treatment will still take many years to clean up. Based on results from testing done at homes in the San Miguel neighborhood, TCE in groundwater is volatilizing and has migrated into some neighborhood homes through a process called vapor intrusion.*

2. Section 3 Communications Plan: Include the November 18, 2021, EPA letter for preemptive mitigation sent to RES234/235/236 in Appendix R.
3. Section 3 Communications Plan: Include in the communication plan that EPA and/or Locus will additionally be communicating air sampling results to tenants.
4. Section 5.3 Results with Indoor Source Interferences: It is noted that PCE and “TCE are commonly used in dry cleaning.” Verify that “commonly used” is correct and if the use of PCE, and TCE, for dry cleaning in California has now been largely phased out and will be completely phased out by 2023.
5. Section 7. Mitigation Plan: Note if the submembrane depressurization system installed is active or passive.
6. Section 10.2 Initial Post-Installation Sampling Plan: It is noted that “*air samples will be collected from the crawlspace and living space.*” Include a reference to Figure 2, which shows the location of these samples.
7. Section 10.2: It is noted that passive samplers were used at the following Location IDs: RES234-AMB-1, RES234-PATH-1, RES235-AMB-1, RES235-PATH-3, and RES236-AMB-1.” So it is easier to read, list each sample location in a separate bullet and include the location where the sample was collected. For example, RES234-AMB-1: Living Room.
8. Section 10.2: The word “to” is missing from the sentence: “*The goal of such improvements, if deemed necessary, **will be modify**...*”
9. Table 1: Why are the Urgent and Accelerated Response Action Levels of 6 µg/m<sup>3</sup> and 2 µg/m<sup>3</sup> underlined?
10. Table 2: The description of “*Kitchen Sink*” is assumed to mean Under Kitchen Sink, but this needs to be stated in the table.
11. Appendix D Residential Building Survey Field Forms: There are many issues with the building survey having incomplete information, which will need to be programmatically addressed in the future. Some of the incomplete information is minor and in and of itself not an issue; however, collectively the building surveys needs improvement. The following are examples of questions left blank in the Survey Form:

- “*Are the heating/cooling systems routinely operated?*” Heating/cooling systems is critical information to better understand the potential for vapor intrusion into a building.
- “*Describe remodeling, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when).*” The answer should be positively affirmed as “yes” or “no”.
- “*Describe any chemical infused materials that are regularly brought into the building (including dry cleaned clothes/fabrics or those brought home from work (what/how often)?*” and related questions. The questions were left blank, including the checkboxes for “yes” / “no” for question such as “*Have site chemicals of concern been used or stored in building or adjacent garage?*”
- “*What pathways to the subsurface were observed (e.g., utility conduits penetrating slab or interior wall/s, crawlspace openings or access points, floor drains)?*” was left blank. As the survey question is left blank, it does not appear that the surveyor appreciates that gas lines that feed a “centrally located wall heater(s), cable/internet floor penetrations, or heating/cooler floor registers” are considered floor penetrations.
- “*Do parts of the indoor environment appear stagnant?*” This would include rooms that do not have heating/cooler vents or fans, which may be rooms that should be targeted for sampling.
- “*Potential Sampling Locations?*” The rationale for why the sampling locations were selected needs to be included here based in part on answers to all of the questions above. Rooms to target for example would be where there are floor penetrations; room with stagnant air flow; rooms with negative pressure; or bedroom with sensitive populations, such as women of childbearing age.
- RES236 form section for Additional Notes only states “*N/A Covid Sampling*”. It is unclear what this means.

Prior to the next building survey event EPA requests 21 days advanced notice of tentative field dates so EPA has an opportunity to audit the building survey event.

12. Appendix Q Analytical Laboratory Reports and Chain-of-Custodies: The Eurofins laboratory Narrative for Workorder# 2112548R1 states that samples for “*RES235-PATH-2-121621 were cancelled on 1/5/22 per client's request*” and that “*Per client's request, the workorder was reissued on 1/10/2022 to cancel samples... RES235-PATH-2-121621 and to remove the results from the final report.*” Sample RES235-PATH-2 was not shown in the Building Survey, which implies that field notes from the 12/16/21 event showing the location of RES235-PATH-2 were not included in the BSER and potentially that the BSER field notes were not completed contemporaneously with the field event. The BSER needs to be revised to include the 12/16/21 field notes and where the RES235-PATH-2 sample was located. Additionally, the BSER needs to include why the results from RES235-PATH-2 were removed from the laboratory report.

EPA also requests that Locus follow-up with EPA with more details on what the results were that were requested to not be reported.

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13. Appendix Q: For the samples collected on 12/16/21, the Eurofins Laboratory Report for Workorder# 2112548R1 includes a chain of custody (COC) for samples collected on 1/5/22. A revised BSER needs to be submitted to EPA that includes a corrected Eurofins laboratory report with the correct COC for the samples collected on 12/16/21.
14. Appendix Q: The laboratory report includes sample results from buildings other than RES234/235/236. EPA suggests that in the future laboratory reports are building specific and if this can be accomplished by using separate COCs for each building sampled.
15. Appendix TBD: EPA requests that a photo log showing the sampling locations be included in the BSER template. What is shown in the photos will need to be approved by the residents and the photos redacted from public versions of the BSER.

Please feel free to call or email me to schedule a meeting if you want to go over any of EPA's comments.

Sincerely,



Michael Schulman  
Remedial Project Manager

Cc (via email): Shau-Luen Barker, Philips Semiconductors  
Nancy-Jeanne LeFevre, Locus Technologies  
Lilian Abreu, EPA  
Edwin "Chip" Poalinelli, EPA  
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